

### **Remarks/Arguments**

The present amendment is made in response to the Office Action. Upon entry of the amendment, claims 11-21 will be pending. This amendment adds claim(s) 18-21 and amends claim 11. This amendment also amends the specification (by a replacement paragraph).

#### **I. Previous Claim Rejections**

As the undersigned understands pages 2-3 of the Office Action, the only grounds of rejection currently pending are those discussed in the Office Action (dated January 18, 2008), and that any previous grounds of claim rejection are no longer pending. Please let the undersigned know if this understanding is not correct.

#### **II. Claim Rejections – Anticipation -- 35 USC § 102**

The Office Action rejects claims 11-15 on 35 U.S.C. §102 anticipation grounds based on US patent 5,686,224 ( “O’Neill”). Claim 11 has been amended to overcome this rejection.

Specifically, as stated in the Office Action, O’Neill discloses a graded mask having variable areas. However, the O’Neill mask is designed for use in developing photoresist with ultraviolet (“UV”) radiation. Accordingly, the O’Neill mask is graded and variable with respect to degree of transmittance of UV radiation transmittance, with the UV radiation having wavelengths suitable for developing photoresist. (See, O’Neill at Abstract.)

Claim 11 amended has been amended to recite “a second region having second non-zero transmittance with respect to infrared wavelength(s) suitable for use in the plasma etching

process that is different than said first non-zero transmittance with respect to infrared wavelength(s) suitable for use in the plasma etching process.” (Current claim amendments shown by underlining.) This is very different than the O’Neill mask, which is not disclosed to transmit infrared radiation at all. For this reason, claims 11-15 are not anticipated by O’Neill.

## **II. Claim Rejections – Obviousness – 35 USC § 103**

### **A. Campi Reference and Claim 11**

The Office Action rejects claim 11 on 35 U.S.C. §103 obviousness grounds based on US patent 6,569,580 ( “Campi”). This claim 11 has been amended to overcome this rejection.

Specifically, Campi discloses a mask for transmitting visible light radiation, ultraviolet radiation or x-rays. (See Campi at column 1, line 40; column 8, lines 54-65; and column 9, line 2.) The Campi mask is not disclosed to be useful for selectively masking IR radiation. The Campi mask has multiple layers 400, 500 (see Campi at Figure 7), and these multiple layers are characterized by different transmissivities. (See Campi at column 10, lines 60-67.) However, because the portions of the Campi mask having different transmissivities are stacked on top of each other as layers, it means the transmissivity is the same over all regions of the mask that transmit the radiation that the Campi mask is designed to transmit. (See Campi at Figure 7.)

Claim 11 amended has been amended to recite “a second region having second non-zero transmittance with respect to infrared wavelength(s) suitable for use in the plasma etching process that is different than said first non-zero transmittance with respect to infrared wavelength(s) suitable for use in the plasma etching process.” (Current claim amendments

shown by underlining.) This is very different than the Campi mask, which is: (i) not disclosed to transmit infrared radiation at all; and (ii) does not have different regions of different transmissivity, but rather layers of different transmissivity resulting in a uniform transmissivity over transmitting region(s) of the mask. For these reasons, claim 11-15 is patentable over O'Neill.

#### **B. Claims 16-17**

The Office Action rejects claims **16-17** on 35 U.S.C. 103 obviousness grounds based on one or more of the following references: (i) O'Neill; (ii) US patent 6,867,420 ("**Mathies**") (collectively "the Applied Art"). This rejection is respectfully traversed for the following reasons.

First, like O'Neill, Mathies also fails to disclose any filter for selectively filtering or masking infrared radiation as now recited in claim 11. For this reason, claims 16 and 17 (whose base claim is claim 11) are patentable over the Applied Art.

Second, O'Neill and Mathies are completely different types of systems. As mentioned above, O'Neill is a system for developing photoresist with ultraviolet ("UV") radiation. On the other hand, Mathies is an optical system for detecting fluorescently labeled analytes in microchips. Because these two systems use such different materials and perform such different functions, one of ordinary skill in the art would not have combined these systems in any way, much less in the precise way suggested in the Office Action. Because these two systems use such different materials and perform such different functions, it is highly unlikely that the unmotivated combination suggested in the Office Action would be possible and/or work for any useful purpose. This is a further reason that claims 16-17 are patentable over the Applied Art.

#### **IV. Support for Newly Added Claims**

Exemplary support for the newly-added claim(s) in the specification as originally filed is provided below in table form.

<b>Claim</b>	<b>Exemplary Support In Spec As Filed</b>
18	Paragraph 10
19	Paragraph 30
20	Paragraph 10
21	Figure 1 and Paragraphs 10 and 24

#### **V. Distinguishing Newly Added Claims from Previously Applied Art**

Newly-added claim 18 is patentable over any references discussed herein for the reasons discussed above in connection with its base claim, claim 11. Also, claim 18 recites that the “first region is shaped to compensate for spatial etch distortions in the plasma etching process” and “said second region is shaped to compensate for spatial etch distortions in the plasma etching process.” This is not taught or suggested by any of the prior art applied in the Office Action. This is a further reason that claim 18 is patentable and in condition for allowance.

Newly-added claim 19 is patentable over any references discussed herein for the reasons discussed above in connection with its base claim, claim 11. Also, claim 19 recites that the “said first region is further adapted to select for a resonant frequency of infrared radiation” and “said second region is further adapted to select for a resonant frequency of infrared radiation.” This is not taught or suggested by any of the prior art applied in the Office Action. This is a further reason that claim 19 is patentable and in condition for allowance.

Newly-added claim 20 is directed to a filter that recites “said transmission regions of said plurality of transmission regions being distributed over said area so that they mirror spatial etch

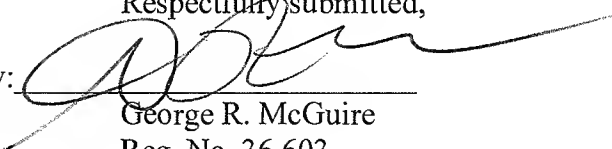
distortions that would occur in the plasma etching process absent the selective transmission of infrared radiation by said filtering structure.” This is not taught or suggested by any of the prior art applied in the Office Action. For this reason, it is respectfully submitted that claim 20 is patentable and in condition for allowance.

Newly-added claim 21 recites claim language similar to that discussed above in connection with claim 11 and is patentable over the references discussed herein for at least reasons similar to those discussed in connection with claim 11.

## **VI. Conclusion**

In view of the foregoing amendments and/or discussion, it is respectfully submitted that this application is ready for allowance. If the Examiner believes a telephone conference with Applicant’s attorney would expedite prosecution of this application, please contact the undersigned at (315) 218-8515.

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